The Monitor

The Quarterly Newsletter of the ETV Advanced Monitoring Systems (AMS) Pilot

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Vendors Discuss Joining NO/NO_2 Monitoring Verification Test

Representatives of six companies with portable NO/NO_2 analyzers met in Columbus, Ohio, on August 24 with staff from Battelle and the U.S. Environmental Protection Agency's (EPA) Environmental Technology Verification Program (ETV) to discuss the first verification test in the Advanced Monitoring Systems pilot (AMS).

Vendors from the following companies participated in the meeting: ECO Physics, Inc., Ann Arbor, MI; ECOM America Ltd., Duluth, GA; Energy Efficiency Systems, Westboro, MA; Horiba Instruments, Pittsburgh, PA; Testo, Inc., Flanders, NJ; and TSI, Incorporated, Shoreview, MN.

The major purposes of the meeting were to give NO/NO_2 vendors additional information about the verification process and test plan as well as to discuss parameters for verification testing and the preliminary test schedule.

Key reasons for the vendors to participate in the ETV verification testing include increased credibility because of independent verification testing, potential for expedited regulatory acceptance, and greater confidence for buyers.

In preparation for the meeting, vendors had submitted detailed information about their NO/NO_2 analyzers, including capabilities, operating requirements or limitations, and descriptions of previous tests.

The next step is for companies to formally commit to participate in the verification test. Then they will help Battelle finalize a test/quality assurance plan for the verification test. The verification test is expected to take approximately one month in the laboratory and at selected field sites.

Vendors meet to discuss the first verification test.

Instruments that monitor NO/NO_2 emissions were identified as one of the key needs by members of the air stakeholder committee in February. Other needed air monitoring technologies identified by stakeholders were:

- Real-time field instruments that can measure fine particulate matter in ambient air or that correlate with the Federal Reference Method for this measurement;
- Automated monitors with sample inlets specially designed for speciation of volatile organic compounds in ambient air; and
- Real-time field monitors for measurement of speciated organics and/or inorganics from point sources.

Representing EPA at the meeting were Robert G. Fuerst, pilot manager, and Elizabeth Hunike, quality assurance specialist, both in EPA's National Exposure Research Laboratory at Research Triangle Park, NC. Battelle was represented at the meeting by Karen Riggs, program manager for the AMS pilot, and Thomas Kelly, the pilot's verification testing leader.

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The AMS Pilot is one of 12 pilots in the U.S. Environmental Protection Agency's Environmental Technology Verification Program

Separate Stakeholder Committee Meetings Held in September

The second meetings of the AMS pilot's water and air stakeholder committees were held September 10-11 in Seattle (water) and September 16-17 in Chicago (air).

The air and water stakeholder committees each are comprised of 25 to 30 representatives of federal, state, and local environmental and regulatory agencies; trade and professional associations; business and investment companies; and other organizations. The role of stakeholders is to provide input from their various perspectives on implementing the AMS pilot.

Members of both committees reviewed a draft generic verification protocol for evaluating environmental technologies, identified ways to increase vendor and regulatory awareness of the AMS pilot, discussed monitoring needs, and reviewed preliminary plans for privatizing the pilot. (See article on page 1 about the first meeting held for vendors of NO/NO_2 analyzers.)

The verification protocol is a guide for the AMS pilot's general verification process. It describes how technologies are to be prioritized (by the monitoring need it addresses), solicited, selected for verification, tested, and reported. The protocol also contains a description of the general study design and the test/QA plan.

Following are summaries of actions by the two committees:

Water Stakeholder Committee

Water stakeholders reviewed the responses from vendors to the initial request for technology (RFT) for water technology needs they had identified at their first meeting in February.

They agreed Battelle should proceed with the verification testing of two technology categories: (1) home test kits for measuring metals (lead, copper) in drinking water and (2) fiber optic sensors for monitoring organics in groundwater and surface water. Several vendors have already submitted requests for verification of instruments in these technology categories; additional vendors are being sought.

Stakeholders also discussed how they could assist Battelle in identifying additional vendors with the types of water monitoring technologies currently needed. They will review the current mailing list of more than 500 vendors and provide names of the persons at individual companies most likely to be interested in having a technology verified under the ETV program. With additional vendor names, the RFT will be reissued to invite more vendors to participate.

Committee members also suggested ways the AMS pilot could help build relationships with regional, state, and local regulators and health agencies.

Air Stakeholder Committee

Air stakeholders reviewed the 41 forms from vendors interested in submitting technologies for verification tests under the AMS pilot. To maximize resources, technology categories were established. Technology categories consist of similar technologies that can be tested in a single verification test.

Stakeholders concurred that verification testing should proceed for the following technology categories: NO/NO_2 analyzers, monitors for fine particulate matter, long-path Fourier Transform Infrared (FTIR) instruments, and specialized sampling inlets used to speciate volatile organic compounds. NO/NO_2 analyzers will be verified first, followed by fine particulate monitors.

Additional vendors will be sought to participate in verification tests of the long-path FTIR instruments and specialized sampling inlets before the verification tests for these categories begin.

Stakeholders also identified mercury monitoring as a significant need to be addressed with verified technologies. Air stakeholders provided many

Meet the Stakeholder Committees

Beginning with this issue, The Monitor *will spotlight two members of the AMS stakeholder committees--one each from the air and water committees.*

Judith Chow, Air Stakeholder Committee

Dr. Chow is a research professor in the Energy and Environmental Engineering Center at the Desert Research Institute in Reno, NV. She has more than 21 years' experience in conducting air quality studies and performing data analysis. As director of DRI's Environmental Analysis Facility, she supervises filter processing and chemical operations and develops cost-effective, accurate methods for aerosol sampling and analysis. She has been the principal investigator or major collaborator in more than 40 large air quality studies and many smaller ones.

Dr. Chow prepared and revised sections of the U.S. EPA's criteria document for chemical analysis and source emissions. She is currently co-principal investigator of a Mexico City aerosol characterization study and several other measurement method studies.

William Telliard, Water Stakeholder Committee

Mr. Telliard has been employed in the U.S. EPA's Engineering and Analysis Division since 1976. He is currently director of the Analytical Methods Staff and directs and coordinates analytical methods development, sampling, analysis, and quality assurance/quality control for the Office of Water studies.

He has more than 25 years' experience in the application of chemical analytical methods to analyze environmental effects. He formerly served as chief of the Industrial Waste Laboratory for the City of Cleveland, as a vice president and technical director of Aqua Laboratories, and in the EPA's Office of Water Enforcement and Permits.

suggestions for increasing efforts to reach interested vendors and regulatory agencies, including coordinating outreach activities with the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) and regional organizations such as the California Air Pollution Control Officers Association (CAPCOA).

They also recommended that the AMS pilot participate in specialized conferences, such as the Air & Waste Management Association's (AWMA) remote sensing conference. Stakeholders also volunteered to assist with outreach activities.

Vendor Meeting

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The NO/NO_2 verification tests are expected to begin this fall. Vendor meetings to discuss verification tests for other categories of air and water technologies are also to be held this fall. Vendors of other selected technology categories will be asked to submit information about their technologies and indicate if they are interested in participating in a vendor meeting.

EPA and Battelle are partners in the AMS pilot, whose objective is to verify the performance characteristics of commercially ready technologies for monitoring air, water, and soil. Verification provides potential purchasers and permitters with an independent and credible assessment of the technology they are buying or permitting.

Q&A

What is the purpose of emissions monitoring?

Several U.S. laws (e.g., Titles III and V of the U.S. Clean Air Act Amendment) regulate the species and quantities of toxic emissions that can be released into the air, water, or soil. Such laws direct the U.S. EPA to develop regulations and guidelines that companies must follow to detect and prevent these emissions. The regulations include requirements for companies to install equipment to monitor for and detect accidental releases.

What is the final product of the ETV verification test?

The final product of an ETV verification test is an EPA verification statement which summarizes performance data from the verification test report. The verification statement is signed by an EPA laboratory director to signify EPA's recognition of the verification. Verification statements are posted on the ETV web site (http://www.epa.gov/etv).

Does EPA's ETV program certify technologies?

No, EPA's ETV program does not certify a technology or issue a verification certificate. The ETV program evaluates and verifies a technology's performance under specific, predetermined criteria or test conditions, following stringent quality assurance procedures and issues a verification statement.

Abbreviations

AMS – Advanced Monitoring Systems
DRI – Desert Research Institute
EPA – U.S. Environmental Protection Agency
ETV – Environmental Technology Verification
FTIR -- Fourier Transform Infrared
NOAA – National Oceanic and Atmospheric Administration
NO – nitrogen oxide
NO_2 – nitrogen dioxide
PM – particulate matter
RFT – Request for Technology
UV – ultraviolet [light]
VOC – volatile organic compound

Upcoming Events

October 1998

Initial AMS pilot verification tests begin on NO/NO_2 analyzers.

November 1-4, 1998

AWWA Water Quality Technology Conference & Exhibition Sheraton Hotel, San Diego, CA

March 7-12, 1999

Pittcon© '99
Orange County Convention Center, Orlando, FL

June 20-24, 1999

A&WMA 92nd Annual Meeting & Exhibition
St. Louis, MO

Information about the EPA's Environmental Technology Verification Program and all 12 of its pilots can be found on the World Wide Web at http://www.epa.gov/etv. The AMS pilot information is at http://www.epa.gov/etv/07/07. Or you can contact Helen Latham at Battelle, 505 King Avenue, Columbus, OH 43201-2693, Phone 614-424-4062, Fax 614-424-5601, or send an email to Lathamh@battelle.org.

FYI…*The Monitor* is being sent to you because of your possible interest in the Advanced Monitoring Systems pilot, which is one of the 12 pilots in the U.S. EPA's Environmental Technology Verification Program. If you want to continue receiving this newsletter, you do not need to respond. If you have corrections or would like to have your name removed from our mailing list, please complete this form and return it to Helen Latham, address above.

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